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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/822,726

04/13/2004

Suk Kee Hong

2336-265

2906

7590

11/17/2005

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EXAMINER

WONG, ERIC K

ART UNIT

PAPER NUMBER

2883

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                               |                             |  |
|------------------------------|-------------------------------|-----------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/822,726 | Applicant(s)<br>HONG ET AL. |  |
|                              | Examiner<br>Eric Wong         | Art Unit<br>2883            |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to <sup>application</sup> ~~communication(s)~~ filed on 13 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/24/05</u>   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 08/24/2005 has been considered by the examiner and made of record (note the attached copy of form PTO-1449).

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admission of prior art, and further in view of United States Patent Number 6,441,360 to Bishop et al.

Applicants disclose as prior art in figures 1 and 2, a WDM system as claimed.

As to claim 2, a thin film filter is disclosed (figure 1);

As to claim 3, a GRIN lens is disclosed (paragraph 9);

As to claims 4, 10, a pigtail is disclosed (11; figure 1). The use of optically transparent adhesives would be inherent in an optical pigtail design.

As to claim 7, all components are on a single board;

As to claim 8, a photodetector is disclosed.

As to claim 9, collimators are disclosed.

As to claims 11-12, figure 2 discloses an air gap.

As to claim 13, fixing tubes are disclosed (figure 2).

As to claim 14, vent holes (41, 42; figure 2) are disclosed.

However, Applicant's fail to disclose in the background of the invention as prior art, a MEMS shutter member for attenuating an optical signal. It is respectfully noted that MEMS shutters are widely used in the art.

Bishop et al. discloses a MEMS-based optical attenuator that uses such a shutter in the abstract and figures 1A-2. Such a device utilizing MEMS technology and a shutter optically isolates a component and minimizes size.

Since Applicant's admission of prior art and Bishop et al. are both from the same field of endeavor, the use of a shutter as disclosed by Bishop et al. would have been recognized in the pertinent art of Applicant's disclosure of prior art.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the shutter in a MEMS system as disclosed by Bishop et al. in the prior art WDM system disclosed by Applicant for the motivation of manipulating and selectively allowing optical signals to pass and to optically isolate and protect components from electrical surges.

### *Conclusion*

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. United States Patent Application Publication 2003/0152326 to Morimoto et al. for an optical module that uses MEMS technology with a filter, collimator, and "finger"-based MEMS actuation (Figure 3-6).

Art Unit: 2883

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Wong whose telephone number is 571-272-2363. The examiner can normally be reached on Monday through Friday, 830AM - 430PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



EW



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